

CLAIMS:

1. An analysis apparatus, in particular a spectroscopic analysis apparatus, for analysing an object comprising:

- an excitation system for emitting an excitation beam to excite a target region,
- a beam separation unit for separating at least part of elastically scattered radiation from inelastically scattered radiation, said scattered radiation being generated by the excitation beam at the target region,

5 - a monitoring system for generating an image of the target region using the elastically scattered or the inelastically scattered radiation and for defining a region of interest in said image,

10 - a detection system for detecting scattered radiation from the defined region of interest generated by the excitation beam and

- a control unit for controlling the excitation system such that the defined region of interest of the target region is excited and/or for controlling the detection system such that only signals from the defined region of interest are detected.

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2. An analysis apparatus as claimed in claim 1,
wherein said monitoring system is adapted to distinguish between different image portions using contrast information in the image.

26 3. An analysis apparatus as claimed in claim 1,
wherein said monitoring system is adapted to distinguish between different image portions using spectral information in the detected scattered radiation.

25 4. An analysis apparatus as claimed in claim 1,
wherein said detection system comprises a filter for separating high frequency spectral portions in a Raman signal, in particular portions comprising contributions from protein and water, from low frequency spectral portions, in particular a fingerprint spectral region.

5. An analysis apparatus as claimed in claim 1,
wherein said monitoring system is adapted for emitting a monitoring beam to image the target region.

5 6. An analysis apparatus as claimed in claim 5,
further comprising a radiation source to emit an output beam and an optical separation system to separate the monitoring beam and the excitation beam from the output beam.

7. An analysis apparatus as claimed in claim 1,
10 wherein said monitoring system includes a confocal scanning laser microscope and said detection system has a confocal relationship with the confocal scanning laser microscope.

8. An analysis apparatus as claimed in claim 1,
wherein said monitoring system includes an orthogonal polarised spectral imaging
15 arrangement.

9. An analysis apparatus as claimed in claim 1,
wherein said control system is adapted for controlling said excitation system to distribute the
laser power over the defined region of interest
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10. An analysis apparatus as claimed in claim 1,
wherein said control system is adapted for controlling said detection system to block
unwanted signals from parts of the defined region of interest and to detect only wanted
signals from the defined region of interest.
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11. An analysis method, in particular a spectroscopic analysis method, for analysing an object comprising the steps of:
- emitting an excitation beam to excite a target region,
- separating at least part of elastically scattered radiation from inelastically scattered
30 radiation, said scattered radiation being generated by the excitation beam at the target region,
- generating an image of the target region using the elastically scattered or the inelastically scattered radiation,
- defining a region of interest in said image, - controlling the excitation system such that the defined region of interest of the target region is excited and/or controlling the detection

system such that signals from the defined region of interest of the target region are detected, and

- detecting scattered radiation from the defined region of interest generated by the excitation beam.